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200W-ZP-1 PUMP-AND-TREAT SYSTEM

INSTRUMENT CALIBRATION PROCEDURES

Author:

T. J. Gibson

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Date

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200W-ZP-1 PUMP-AND-TREAT SYSTEM INSTRUMENT CALIBRATION PROCEDURES

| Author: | T. J. Gibson | 9/23/96 Date |
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1.0 PURPOSE

This procedure provides instructions for calibrating 200W-ZP-1 pump-and-treat system instrumentation.

2.0 INFORMATION

Information used to perform 200W-ZP-1 instrument calibrations includes this procedure and associated work control packages, vendor manuals, and other controlled documents such as 200W-ZP-1 electrical schematics 0200W-DD-J0071 through J0105.

3.0 PERSONNEL REQUIREMENTS

Personnel requirements for performing 200W-ZP-1 instrument calibrations are as follows:

- Instrument technician
- Equipment operator
- Field superintendent (as needed).

4.0 PROCEDURE COMPLIANCE

If any of the following occurs while performing this procedure, **immediately** stop work, place equipment in a safe condition, and notify your supervisor:

- Any equipment malfunction that could prevent fulfillment of the equipments' functional requirements.
- Personnel error or procedural inadequacy that could prevent fulfillment of procedural requirements.

Contact your supervisor for additional instructions if changes in system conditions affects work or work extends past end-of-shift.

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Always comply with Bechtel Hanford Inc. (BHI) and U.S. Department of Energy (DOE) environmental standards when disposing of any waste generated during performance of this procedure. Consult the Field Superintendent and the Area Hazardous Waste Coordinator for specific instructions. Additionally, always comply with BHI lock and tag requirements.

If any steps in this procedure's Data Sheets are not required or are deviated, those steps shall be appropriately annotated in the associated data sheet signoff space and explained in the COMMENTS section.

Sections or steps of this procedure may be performed out of sequence to suit maintenance or system conditions.

Appendix A lists 200W-ZP-1 instruments and their associated calibration frequency. Appendix B contains the associated Data Sheets used during performance of individual instrument calibrations.

5.0 PREREQUISITES

Obtain release from the Operations Superintendent prior to performing calibration procedures.

Check that applicable lock and tag requirements have been satisfied.

If any instrument is found defective, repair or replace AFTER approval from the person-in-charge (PIC) and repeat applicable steps for calibration.

This procedure typically provides instructions to calibrate discreet components with the 200W-ZP-1 system remaining **on-line**. To preclude system trips resulting from calibrating certain instruments, the PLC must accordingly be used to "force" certain system parameters to fixed, normal values. When points are forced, associated interlocks are disabled. **Therefore, an operator must be present to monitor the system and take protective action manually if required.**



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6.0 TEMPERATURE LOOP - TYPE 'K' THERMOCOUPLE WITH OMEGA TEMPERATURE TRANSMITTER

This section provides instructions for calibrating OMEGA temperature transmitters.

6.1 Special Tools, Equipment, and Materials

- Thermocouple simulator (Type K, Model 1064 PSN compatible)
- TISOFT on-line and selected for display and use
- Operations Manual "TX64 Programmable Temperature Transmitter M1484/0492"
- Thermometer.

- 1. At the PLC, force an input integer value equivalent to the actual system temperature of the instrument loop being calibrated.
- 2. Remove thermocouple leads from the OMEGA temperature transmitter and insert the thermocouple simulator leads.
- 3. Vary the simulator input per Data Sheet and record values read from the thermocouple simulator.
- 4. If the "AS FOUND" data is within tolerance, record data in the "AS LEFT" column of the Data Sheet and proceed with restoration. If data is not in tolerance, continue to step 5.
- 5. Using the specified vendor manual, apply the "Top Mode Configuration Setup" flowchart to perform 1) "Rezero/Respan" and/or 2) "Trim 4.00 mA/Trim 20.0 mA". Then, follow flow chart instructions to "Return to Operate Mode".
- 6. Vary the simulator input per the Data Sheet and verify proper calibration: record AS LEFT data in the Data Sheet.
- 7. If the transmitter cannot be calibrated, troubleshoot/repair/replace transmitter and verify calibration.

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6.3 Testing and Acceptance

Verify (with a thermometer) that temperature reading is consistent with system conditions.

6.4 Restoration

- 1. Disconnect and remove test equipment.
- 2. Restore transmitter to normal conditions.
- 3. Unforce PLC input integer value(s).

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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7.0 THERMOCOUPLE LOOP WITH TYPE "J" THERMOCOUPLE FEEDING PLC THERMOCOUPLE CARD

This procedure provides instruction for calibrating Tank T01 and T02 temperature loops.

7.1 Special Tools, Equipment and Materials

- Thermocouple simulator (Type J, Model 1064PSN compatible)
- TISOFT on-line and selected for display and use
- Thermometer.

- 1. At the PLC, force an input integer value equivalent to the actual system temperature of the instrument loop being calibrated.
- 2. Remove the thermowell cap and insert thermocouple simulator leads onto corresponding terminals.
- 3. Vary the simulator input per the corresponding Data Sheet and record values read from the associated MCP temperature indicator (Red Lion controls) on the "AS FOUND" column of Data Sheet.
- 4. If data is within tolerance, record "AS LEFT" data on Data Sheet and proceed with RESTORATION. If data is not within tolerance, troubleshoot/repair/replace transmitter and verify calibration.

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7.3 Testing and Acceptance

Verify (with a thermometer) that temperature reading is consistent with system conditions.

7.4 Restoration

- 1. Disconnect and remove test equipment.
- 2. Restore thermowell to normal conditions.
- Unforce PLC input integer value(s).

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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8.0 ROSEMOUNT DIFFERENTIAL PRESSURE TRANSMITTERS

This section provides instructions for calibrating Rosemount differential pressure transmitters (Model 1151 SMART).

8.1 Special Tools, Equipment, and Materials

- DVM
- Pressure Source (capable of generating 60 PSI)
- Pressure Gauge (0 to 60 PSI)
- 4 to 20 mA current source
- TISOFT on-line and selected for display and use
- Rosemount Measurement Operating Manual MFM4593A77
- HART Communicator Operating Manual MAN4275A00.

8.2 Instructions

1. Adhere to the applicable CAUTION and associated instructions PRIOR TO isolating the desired transmitter:

CAUTION

To preclude system trips, ensure the following prior to calibrating WATER LEVEL TRANSMITTERS.

- At the PLC, force and input integer value equivalent to the actual water level of the instrument loop being tested. This input will be entered at the first PLC analog input module in series with the corresponding level transmitter output signal.
- At the MCP, place the corresponding HONEYWELL controller in MANUAL.

CAUTION

To preclude system trips, ensure the following prior to calibrating PROCESS FILTER and FLOW (△P) TRANSMITTERS INSTRUMENT loops.

 At the PLC, force an input integer value equivalent to the current differential pressure of the loop being tested.



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- 2. Valve out the (DESIRED) differential pressure transmitter to isolate it from the process and verify no pressure exists.
- 3. As required, disconnect tubing from **LOW** pressure port and vent to atmosphere.
- 4. Disconnect tubing from **HIGH** pressure port and connect test pressure source and gauge.
- 5. Remove cap from transmitter and connect HART Communicator to terminals.
- 6. Input test pressures per Data Sheet.
- 7. Record "AS FOUND" data on the Data Sheet.
- 8. If data is within tolerance, record "AS LEFT" data on the Data Sheet and, proceed with RESTORATION. If data is out of tolerance, continue to step 8.

NOTE: Use the HART vendor manual in conjunction with the remaining instructions.

- 9. From the HART on-line menu, select DEVICE SETUP, then....
- 10. From the DEVICE SETUP MENU, select DIAG/SERVICE, then....
- 11. From the DIAG/SERVICE menu, select CALIBRATION, then....
- 12. From the CALIBRATION menu, select TRIM ANALOG OUTPUT, then....
- 13. From the TRIM ANALOG OUTPUT menu, select the desired option and follow the HART's "on-line" instructions.
- 14. If data is within tolerance, record "AS LEFT" data on the Data Sheet and proceed with RESTORATION. If the values are still unacceptable, repeat necessary instructions until values are within tolerance.
- 15. If the transmitter cannot be calibrated, troubleshoot/repair/replace transmitter and verify calibration.

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8.3 Testing and Acceptance

Ensure all display readings are consistent with system conditions.

8.4 Restoration

- 1. Disconnect and remove test equipment.
- 2. Restore transmitter to normal conditions.
- Reset alarms.
- 4. Return HONEYWELL controllers to AUTOMATIC.
- 5. Unforce PLC inputs.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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9.0 ASCO AND UE PRESSURE SWITCHES

This section provides instructions for calibrating ASCO and UE pressure switches.

9.1 Special Tools, Equipment, and Materials

The following tools, equipment, and materials are required for calibrating the pressure switch loops:

- DVM (set on OHMs scale)
- Pressure Source (capable of generating 60 psig)
- Pressure Gauge (0 to 60 psig)
- TISOFT on-line and selected for display and use.

- 1. At the PLC, force an input integer value equivalent to the actual system pressure of the instrument loop being calibrated.
- 2. Valve out the pressure switch to isolate it from the process and verify no pressure exists.
- 3. Either disconnect tubing from pressure switch or remove cap from pressure tap (tubing tee above switch) and connect test pressure source and gauge.
- 4. Remove pressure switch cover, lift pressure switch leads, and connect DVM across switch terminals.
- 5. Input test pressures per the Data Sheet. Record "AS FOUND" data on the Data Sheet.



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- 6. If "AS FOUND" data is within tolerance, record "AS LEFT" data on the Data Sheet and proceed with RESTORATION; if data is not within tolerance, continue to step 7.
- 7. To adjust the pressure switch, turn the appropriate adjusting nut to set the actuation setpoint. The actuation setpoint will be observed on the DVM when the switch changes states.
- 8. Input pressure per the Data Sheet and calibrate switch. If data is within tolerance, record data in the "AS LEFT" column of Data Sheet and proceed with RESTORATION. If the instrument cannot be calibrated, continue to step 9.
- 9. Troubleshoot/repair/replace switch and verify calibration.

9.3 Testing and Acceptance

Ensure all display readings are consistent with system conditions.

9.4 Restoration

- 1. Disconnect and remove test equipment.
- 2. Reterm leads and replace switch cover.
- 3. Unforce PLC input integer value(s).

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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10.0 ASHCROFT PRESSURE GAUGES

This section provides instructions for calibrating field-installed ASHCROFT pressure gauges, Model 1279 or equal.

NOTE: Because of the variety of bourdon tube and linkage configurations, refer to specific vendor information when span adjustments are desired.

10.1 Special Tools, Equipment, and Materials

- Variable pressure source (e.g., manometer, dead weight tester) capable of generating 100 psig
- Pressure gauge (0 to 100 psig)

- 1. Valve out gauge to isolate it from the process and verify that no pressure exists.
- 2. If necessary to properly calibrate gauge, remove gauge from installed location.
- 3. Connect input pressure source and test gauge.
- 4. Input test pressure(s) specified per the Data Sheet, and record "AS FOUND" data on the Data Sheet.
- 5. If "AS FOUND" data is within tolerance, record "AS LEFT" data on the Data Sheet and proceed with RESTORATION. If data is not within tolerance, continue to step 6.
- 6. If "zero" needs adjustment, either 1) use ZERO Adjusting screw, OR if none exists, 2) remove needle from spindle, and without moving spindle, reattach pointer to spindle so pointer indicates "zero."



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- 7. Input test pressures per the Data Sheet. If data is within tolerance, record "AS LEFT" data on the Data Sheet. If data is not within tolerance, continue to step 8.
- 8. Troubleshoot/repair/replace gauge and verify calibration.

10.3 Testing and Acceptance

Ensure gauge readings are consistent with system conditions.

10.4 Restoration

- 1. Disconnect and remove test equipment.
- 2. Restore gauge to normal conditions.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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11.0 DWYER MAGNAHELIC DIFFERENTIAL PRESSURE GAUGES

This procedure provides instructions for calibrating field-installed Dwyer Magnahelics, Model 2000 or equal.

11.1 Special Tools, Equipment, and Materials

- Variable pressure source (capable of generating at least 200 inches of water pressure)
- Pressure gauge (capable of indicating at least 100 inches of water pressure)
- Canvas strap wrench (or similar tool that will not damage instrument case).

- 1. Valve out gauge to isolate it from the process and verify that no pressure exists.
- 2. If necessary to properly calibrate gauge, remove gauge from installed location.
- 3. Connect input pressure source and test gauge.
- Input test pressures per the Data Sheet and record "AS FOUND" data in the Data Sheet.
- 5. If "AS FOUND" data is within tolerance, record "AS LEFT" data on the Data Sheet and proceed with RESTORATION. If data is not within tolerance, continue to step 6.
- 6. Using care not to damage case, grasp gauge case firmly and loosen bezel with canvas strap wrench (or similar tool).
- Lift out plastic cover and "O" ring.
- 8. Remove scale screws and scale assembly using care not to damage pointer.

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- 9. Change calibration by moving clamp (part number 70b illustrated by vendor literature).
 - a. If gauge reads high, move clamp toward helix.
 - b. If gauge reads low, move clamp away from helix.
- 10. Restore gauge and zero it.
- 11. After zeroing gauge, reapply pressure and compare reading with test instrument. Make additional adjustments as necessary.
- 12. If data is within tolerance, record "AS LEFT" data on Data Sheet.
- 13. If gauge cannot be brought into tolerance, troubleshoot/repair/replace gauge and verify calibration.

11.3 Testing and Acceptance

Ensure gauge readings are consistent with system conditions.

11.4 Restoration

- 1. Disconnect and remove test equipment.
- 2. Restore gauge to normal conditions.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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12.0 SIERRA FLOW TRANSMITTERS

SIERRA flow transmitters are calibrated by the vendor.

12.1 Instructions/Restoration

- 1. Have operator shut down system.
- 2. Have support personnel remove flow transmitter needing calibration and install calibrated maintenance spare.
- 3. Have operator restore system to operation.
- 4. Prepare flow transmitter for shipment and return it to the vendor for factory calibration.

12.2 Testing and Acceptance

Installation of factory-calibrated spare will constitute recalibration of this Instrument loop.

- Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

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13.0 B&K GAS ANALYZER

The B&K GAS ANALYZER is calibrated by the vendor.

13.1 Instructions

- 1. Have operator shut down system.
- 2. Have operator isolate B&K from process inputs.
- 3. Remove B&K, prepare B&K for shipment, and return to vendor.
- 4. Upon receipt, install vendor-calibrated B&K.
- 5. Have operator connect B&K to process inputs
- 6. Have operator restore system to operation.

13.2 Testing and Acceptance

Installation of factory-calibrated spare will constitute recalibration of this instrument loop.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.



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14.0 RED LION DIGITAL INDICATORS

This procedure provides instructions for performing a calibration check and/or rescaling of MCP-mounted RED LION digital indicators.

14.1 Special Tools, Equipment, and Materials

- 4 mA 20 mA signal generator (standard)
- Model IMP Instruction Manual.

- 1. At the applicable MCP-mounted digital indicator, remove the (+) and (-) INPUT leads and install a 4 mA 20 mA signal generator.
- Vary the signal generator input per the Data Sheet and record "AS FOUND" data (read from the digital indicator being "cal-checked") on the Data Sheet.
- If "AS FOUND" data is within tolerance, record "AS LEFT" data on the Data Sheet and proceed with RESTORATION. If data is not within tolerance, continue to step 4.
- 4. With the aid of the Model IMP Instruction Manual, rescale the digital indicator as follows:
 - Use key-in method to select SCALE, then....
 - Select YES to initiate the scaling program.
 - Follow displayed programmed steps to key in display and signal values for scaling point #1 (zero reference),
 - Follow displayed programmed steps to key in display and signal values for scaling point #2 (SPAN).

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NOTE: At this point, scaling is complete, and the indicator automatically calculates the slope and offset of the display units.

- If it is desired to "PROGRAM NUMBER OF LINEAR SEGMENTS", continue following associated programmed instructions; then, exit program per displayed prompts. Otherwise, exit program by completing currently displayed associated prompts.
- 5. Vary the signal generator input per the Data Sheet. If data is within tolerance, record "AS LEFT" data on the Data Sheet.
- 6. If the digital indicator cannot be brought into tolerance, troubleshoot/repair/replace indicator and verify calibration.

14.3 Testing and Acceptance

Ensure all display readings are consistent with system conditions.

14.4 Restoration

- 1. Disconnect and remove test equipment
- 2. Reterm leads to digital indicator and ensure indicator is fully restored to normal conditions.
- Reset alarms.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.



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15.0 HONEYWELL MICROPROCESSOR DIGITAL CONTROLLERS

This procedure provides instructions for calibrating MCP-mounted Honeywell microprocessor digital controllers, Model UDC 3000.

15.1 Special Tools, Equipment, and Materials

- 4 mA 20 mA signal generator (standard)
- DVM.

- 1. Check that the digital controller is connected to its power supply and warmed up for at least 15 minutes.
- 2. Check that digital controller's LOCKOUT feature is set to NONE. (Refer to vendor manual, Section 3, configuration if necessary).
- Using care not to remove the digital controller's external resistor assembly, lift process signal (+) and (-) input leads at the digital controller's terminal board and connect signal generator.
- 4. Lift digital controller's (+) and (-) output signal leads at the controller's terminal board and connect DVM (set for mA).

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- 5. Insert signal generator inputs for Data Sheet and record "AS FOUND" data on Data Sheet. If data is within tolerance, record "AS LEFT" data on Data Sheet and proceed to RESTORATION. If data is not within tolerance, continue to step 6.
- 6. At the digital controller, perform the following sequence of steps to enable the calibration sequence:
 - Press SETUP UNTIL you see controller display CALIB in upper display and INPUT 1 in lower display.
 - Press FUNCTION; you will see DISABL in upper display and CAL IN1 in lower display.
 - Press UP ARROW; you will see BEGIN in upper display and CAL IN1 in lower display.
- 7. At the digital controller, perform the following sequence of steps to calibrate the 0% range value:
 - Press FUNCTION; you will see APPLY in upper display and IN1 ZERO in lower display.
 - Adjust signal generator input to 4 mA and wait thirty seconds.
 - Press FUNCTION; you will see APPLY in upper display and IN1 SPAN in lower display.
 - Adjust signal generator input to 20 mA and wait 30 seconds.
- 8. Press FUNCTION; the controller will store the calibration constants and exit the calibration mode.
- 9. Remove the signal generator and reterm process signal (+) and (-) input leads.
- 10. Press SETUP UNTIL you see CALIB in the upper display and CURRENT in the lower display.
- 11. Press FUNCTION; you will see "a value between 1 and 2048" in the supper display and ZERO VAL in the lower display.

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- 12. Press UP ARROW or DOWN ARROW until the designed 0% output is read on the DVM as follows:
 - DIRECT ACTION....4 mA
 - REVERSE ACTION....20 mA.
- 13. Press FUNCTION:
 - This stores the 0% range value, and....
 - Indicates "a value between 1 and 2048" in the upper display and SPAN VALUE in the lower display.
- 14. Press UP ARROW or DOWN ARROW until the desired 100% output is read on the DVM as follows:
 - DIRECTION ACTION....20 mA
 - REVERSE ACTION....4 mA.
- 15. Press FUNCTION to store the span value.
- 16. Press LOWER DISPLAY to exit the calibration mode.

15.3 Testing and Acceptance

Run second calibration check; verify AS FOUND data within tolerance of Data Sheet.

15.4 Restoration

- 1. Remove test equipment.
- 2. Reterm digital control (+) / (-) input/output signal leads.
- Reset alarms.

- Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- Send copy of work package to Cognizant Engineer/Field Supervisor.
 Return work package to Maintenance Supervisor.

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16.0 GENERAL EASTERN MOISTURE TRANSMITTER

This procedure provides instructions for calibrating the GENERAL EASTERN moisture transmitter, Model RH-2-IR.

16.1 Special Tools, Equipment, and Materials

- DVM
- RH Sample Standard: 30% RH and/or 80% RH environment
- Signal generator.

16.2 Instructions

NOTE: The following instructions provide guidance for on-line cali<u>b</u>ration. For more precise calibration, the system should be shut down and the sensor removed. The sensor should then be checked at a 30% RH environment and potentiometer VR1 adjusted accordingly. The sensor should then be checked at an 80% RH environment and potentiometer VH2 adjusted accordingly.

- 1. Remove cover from moisture transmitter enclosure.
- 2. For field calibration, perform the following:
 - Lift leads to the transmitter input and install signal generator.
 - Connect DVM in series with output of transmitter. Set DVM for mA.
 - Input test signals per Data Sheet and record "AS FOUND" data on Data Sheet. If within tolerance, Record "AS LEFT" data on Data Sheet and proceed to RESTORATION. If data not within tolerance, continue to next "bulleted" step.
 - Adjust potentiometer VR1 until transmitter output is within tolerance. Record "AS LEFT" data on Data Sheet and proceed with RESTORATION.

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16.3 Testing and Acceptance

Moisture transmitter output signal is within tolerance of Data Sheet.

16.4 Restoration

- 1. Remove test equipment.
- 2. Reterm leads of moisture transmitter and replace cover.
- 3. Reset alarms and have operations personnel restart system if necessary.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor. Return work package to Maintenance Supervisor.

| 200W-ZP-1 Pump-and-Treat |
|--------------------------------------|
| System Instrument Calibration |
| Procedures |

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5. Record 'AS LEFT' data on the Data Sheet. If module cannot be calibrated, troubleshoot /repair/replace module and verify calibration.

17.3 Testing and Acceptance

'AS LEFT' data is within tolerance specified by Data Sheet.

17.4 Restoration

- 1. At the ALARM AND LOCATING MODULE, press ESCAPE until SYSTEM NORMAL window is displayed.
- 2. Remove test equipment and reterm lead.

- 1. Apply calibration labels.
- 2. Inform Field Supervisor of calibrations completed.
- 3. Send copy of work package to Cognizant Engineer/Field Supervisor, then return work package to Maintenance Supervisor.

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17.0 RAYCHEM LEAK DETECTION ALARM AND LOCATING MODULES

This procedure provides instructions for calibrating RAYCHEM LEAK DETECTION ALARM AND LOCATING MODULES, Model TTDM.

17.1 Special Tools, Equipment, and Materials

- DVM (set for mA)
- RAYCHEM Leak Detection and Locating System Operations and Maintenance manual.

- Connect DVM (set for mA) IN-SERIES with ALARM AND LOCATING MODULE's signal input lead.
- 2. At the ALARM AND LOCATING MODULE, perform the following to access the 4-20 mA TEST mode:
 - Press ENTER; Main Menu is displayed.
 - Arrow down to VIEW/EDIT SETTINGS; press ENTER.
 - Arrow down to SELF-TEST MENU; press ENTER.
 - Input PASSWORD with ARROW key; press ENTER.
 - Arrow down to 4-20 mA TEST; press ENTER.
 - Arrow down to LEAK 3540 ft; press ENTER.
 - You will see LEAK ; press ENTER.
 3540 ft
 0001....5000
- 3. At the DVM, record the 'AS FOUND' data on the Data Sheet. If data is within tolerance, record 'AS LEFT' data on the Data Sheet and proceed to restoration. If data is not within tolerance, continue to Step 4.
- 4. Open the door of the ALARM AND LOCATING MODULE and adjust potentiometer V-7 until ALARM AND LOCATING MODULE is within tolerance. Close door.



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APPENDIX A

INSTRUMENT CALIBRATION LIST 200W-ZP-1

This list includes **only those instruments** within loops that are actually calibrated. PLC devices such as electronic switches, electronic recorders, and alarms are **not** listed.

| Instrument Loop | Function | Calibration Frequency |
|---|---|--------------------------|
| FT-E01, FI-FI1 (common to loop containing FT-E02, FT-E03) | Well pump PE01 flow | One year |
| FT-E02, FI-FI1 (common to loop containing FT-E01, FT-E03) | Well pump PE02 flow | One year |
| FT-E03, FI-FI1 (common to loop containing FT-E01, FT-E02) | Well pump PE03 flow | One year |
| FT-TSL01, FI-TSL01 (common to loop containing FT-I11) | Total extraction well flow | One year |
| TE-T01, TI-T01 (common to loop containing TE-T02) | Influent tank temperature | One year |
| LT-T01, LIC-T01 | Influent tank T01 water level | One year |
| PDT-F1, PI-F1A, PI-F1B, PDI-F1 (common to loop containing PDT-F2) | Influent pump filter F-1A pressure; differential pressure | One year |
| FT-TSL02, FIC-TSL02 | Stripper tower V01 inlet flow | One year |
| LT-V01, LIC-V01 | Stripper tower V01 water level | One year |
| PDI-V01 | Stripper tower V01 differential pressure | One year |
| PI-TSL03 | Transfer pump PT03 discharge pressure | One year |
| TE-T02, TI-T02 (common with loop containing TE-T01) | Effluent tank T02 temperature | One year |
| LT-T02, LIC-T02 | Effluent tank T02 water level | One year |



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| Instrument Loop | Function | Calibration Frequency |
|---|---|--------------------------|
| PI-I01 | Effluent pump PI01 discharge pressure | One year |
| PDT-F2, PI-F2A & PI-F2B, PDI-F2 (common to loop containing PDT-F1) | Effluent pump filter F-2A(2B) pressure; differential pressure | One year |
| FT-I11, FI-I11 (common with loop containing FT-TSL01) | Effluent pump PI01 flow | One year |
| FT-I01, FI-I1 | Injection well INJ01 flow | One year |
| FI-TSA01 | Air blower B01 discharge flow | One year |
| FT-TSA05, FI-TSA05 | GAC canister bulk outlet flow | One year |
| PI-TSA01 | Air blower B01 discharge pressure | One year |
| PI-TSA03 | GAC Canister Inlet Header | One year |
| PI-TSA04 | GAC Canister V02A Outlet/V03A Inlet | One year |
| PI-TSA05 | GAC Canister Outlet Header | One year |
| PI-TSA07 | GAC Canister V02B Outlet/V03B Inlet | One year |
| PI-TSA08 | GAC Canister V02C Outlet/V03C Inlet | One year |
| PSHL-TSA01 | Air blower B01 discharge pressure | One year |
| PSH-01 | PT01 discharge pressure | One year |
| PSH-02 | PI01 discharge pressure | One year |
| TE-C01, TT-C01, TI-C01 | Chiller C-01 outlet temperature | One year |

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APPENDIX B

DATA SHEETS

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System Instrument Calibration

Data Sheet

| (-) 20°F | EPN: TT-C01 | | | Data Office | | | | |
|--|--|-----------------|---------------------|--------------------|-------------|---------------|------------|--|
| Nanufacturer/Description: Omega | Nanufacturer/Description: Omega Location: C01/H01 Skid | | | Transmitter Calibr | ation | | | |
| Test Equipment: | Test Equipment: | EPN: TT-C01 | | Model #: TX-64 | | Serial #: N/A | | |
| | | Manufacturer/De | escription: Omega | | | Location: C0 | 1/H01 Skid | - |
| | | Test Equipment: | Type of Eq. | uioment Si | tandards Nu | mber | Cal Ex | n Date |
| | | , 4 | | | | | | |
| | | | | | | | | |
| OUTPUT DATA Test input Desired Output Tolerance MCP As Found In/Out As Letter 12.00 mA 11.20 to 12.80 mA 150°F 20.00 mA 19.20 to 20.80 mA | OUTPUT DATA Test Input Desired Output Tolerance MCP As Found In/Out As I (-) 20°F 4.00 mA 3.20 to 4.80 mA 65°F 12.00 mA 11.20 to 12.80 mA 150°F 20.00 mA 19.20 to 20.80 mA lease Circle: Accept or Reject Reason: Comments: TYPE "K" TE INPUT. | | <u></u> | · | | 1 | 1 | |
| Test Input | Test Input | | **** | | | | | |
| -) 20°F | -) 20°F | | | | 1 | | T | ······································ |
| 12.00 mA | 12.00 mA | | | | МСР | As Found | In/Out | As Left |
| 150°F | 150°F | | | | | | <u> </u> | <u> </u> |
| Performed By: Accept or Reject Reason: TYPE "K" TE INPUT. Date: / / | Performed By: Accept or Reject Reason: TYPE "K" TE INPUT. Date: / / | | | | | | | ļ |
| Reason: TYPE "K" TE INPUT. Performed By: Date: / / | Reason: TYPE "K" TE INPUT. Performed By: Date: / / | 150°F | 20.00 mA | 19.20 to 20.80 mA | <u> </u> | | | |
| Reason: Comments: TYPE "K" TE INPUT. Performed By: Date: / / | Reason: Comments: TYPE "K" TE INPUT. Performed By: Date: / / | logge Cirele: | Accent | ne Dainet | | | | i |
| Comments: TYPE "K" TE INPUT. Performed By: Date: / / | Comments: TYPE "K" TE INPUT. Performed By: Date: / / | ease Circle. | Accept | or Reject | | | | |
| TYPE "K" TE INPUT. | Performed By: Date: / / | Reason: | | • | | | | |
| Performed By: Date:/ / | Performed By: Date: / / | 5 | 7/05 **/** TE INDUT | • | | | | |
| | | Comments; | THE K TEINPUT. | | | | | |
| | | | | | | | | |
| | Checked By: | Performed By: | | | | Date: | 1 | 1 |
| эпескеа ву: | | Checked By: | | | | - | 1 | 1 |

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System Instrument Calibration

Data Sheet

| | | Transmitter Calibr | ation | | | |
|-------------------|-------------------|--------------------|------------------|---------------|--------------|---------|
| EPN: TT-H01 | Mo | odel #: TX-64 | | Serial #: N/A | ate · | |
| Manufacturer/Desc | cription: Omega | | | Location: C0 | 1/H01 Skid | |
| Test Equipment: | Type of Equipment | | Standards Number | | Cal Exp Date | |
| | <u></u> | <u></u> | | | | 1 |
| | | | | | / | 1 |
| | | | | • | 1 | 1 |
| OUTPUT DATA | | | | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| (-) 20° F | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 65° F | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 150°F | 20.00 mA | 19.20 to 20.80 mA | <u> </u> | | | |
| Please Circle: | Accept c | or Reject | | | | |
| Reason: | | | | · <u>-</u> · | | |
| Comments: | | <u> </u> | | | | |
| _ _ | | | | | | |
| Performed By: | | | | Date: | , | , |
| Checked By: | | | | - | -/ | 7 |

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System Instrument Calibration

| | | Data Shee | et | | | |
|----------------------------------|-------------------------|------------------------|--------------|--------------------------------|--|--|
| | | Transmitter Calib | ration | | | |
| EPN: TT-TSA03 | Mo | odel #: TX-64 | | Serial #: EX8 | 8B103703L | £. |
| Manufacturer/Desc Temperature | ription: Omega/Heater I | H-01 Bulk Outlet Flow | | Location: 10" NE Side of He | | C (Above |
| Test Equipment: | Type of Equip | oment S | itandards Nu | mber | Cal Exp | Date |
| | | | | | | 1 |
| | | | | | 1 | 1 |
| | | | | | | 1 |
| | | | | | | |
| • | ****** | ******* Calibration Da | ta ******* | ****** | AA ti | |
| | | | | | | |
| | | OUTPUT DAT | Α | | , | |
| Test Input | Desired Output | Tolerance | MCP | As Found | in/Out | As Left |
| (-) 20°F | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 65°F | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 150°F | 20.00 mA | 19.20 to 20.80 mA | <u> </u> | | | <u> </u> |
| Please Circle: | Accept o | r Reject | | | | |
| Reason: | | | | | | |
| | | | | | | |
| Comments: | | | | | | |
| | | | | | | |
| | | | | | | |
| Performed By: | | | | Date: | 1 | 1 |
| Checked By: | | | <u> </u> | - | / | |
| • | | | | - | ······································ | ······································ |

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System Instrument Calibration

Data Sheet

Transmitter Calibration

| EPN: FT-E01 | Mo | Model #: 1151 DP 4522B1 | | Serial #: 1948372 | | |
|--------------------------|-------------------------|---------------------------|--|---------------------------------|---------|----------|
| Manufacturer/Desc | cription: Rosemount/Ext | . Well WE01 Flow Trans | mitter | Location: 3" - at 200-ZP-1 E | | (NE Wall |
| Test Equipment: | Type of Equipment | | ndards Nu | mber | Cal Exp | Date |
| | | | | | 1 | 1 |
| | | | | | | / |
| | | | - | | | 1 |
| | | ******** Calibration Data | | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | } | | | |
| 6.25" wg | 8.00 mA | 7.20 to 8.80 mA | <u> </u> | | | |
| 25.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | <u> </u> |
| 56.25" wg | 16.00 mA | 15.20 to 16.80 mA | | | | |
| 100.0" wg | 20.00 mA | 19.20 to 20.80 mA | <u> </u> | <u> </u> | | <u> </u> |
| lease Circle: Reason: | Accept c | or Reject | | | | |
| Comments: | | | ······································ | | | |
| Performed By: | | | | Date: | | / |
| | | | | | 1 | 1 |

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System Instrument Calibration

Data Sheet

Transmitter Calibration

| EPN: FT-E02 | N: FT-E02 Model #: 1151DP 4522 B1 | | | Serial #: 1948366 | | | |
|-----------------|-----------------------------------|--------------------------|----------------|-------------------|-------------|---------|--|
| | | t. Well WE02 Flow Tran | | | | | |
| Test Equipment: | Type of Equi | pment Si | andards Nu | mber | Cal Exp | Date | |
| | | | | | 1 | / | |
| | | | | | | / | |
| | | | | | . / | / | |
| | **************** | ******** Calibration Dat | · | **** | n n n | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | - 11101 | ASTOUNG | injour | ASLER | |
| 6.25" wg | 8.00 mA | 7.20 to 8.80 mA | - | | <u> </u> | | |
| 25.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | | |
| 56.25" wg | 16.00 mA | 15.20 to 16.80 mA | | | | | |
| 100.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | | | |
| Please Circle: | Accept | or Reject | | | | | |
| Comments: | | | | | | - | |
| | | | | ••• | | | |

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System Instrument Calibration

Data Sheet

| | | Transmitter Calibra | tion | | | |
|-------------------|-------------------------|---------------------------------------|------------------|---------------------------------|---------------------------|---------|
| EPN: FT-E03 | Mo | del #: 1151DP | | Serial #: 1900 | 585 | |
| Manufacturer/Desc | ription: Rosemount/Ext. | Well WE03 Flow Trans | mitter | Location: 3"-l Manifold Bldg | '-E03-HDPE (Ext. g #1) | |
| Test Equipment: | Type of Equipment | | Standards Number | | Cal Exp | Date |
| | | | | | | |
| | | | | | | 1 |
| | | | | | | 1 |
| | ************* | ******** Calibration Data OUTPUT DATA | **** | ***** | *** | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | 5 | | | |
| 6.25" wg | 8.00 mA | 7.20 to 8.80 mA | | | | _ |
| 25.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 56.25" wg | 16.00 mA | 15.20 to 16.80 mA | | | | |
| 100.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | | |
| Please Circle: | Accept o | r Reject | | | ÷ | |
| Reason: | | | | | | |
| Comments: | | | | | | |
| Performed By: | | | | Date: | / | , - |
| Checked By: | | <u> </u> | · | . | | |

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System Instrument Calibration

Data Sheet

Transmitter Calibration

| | | manomitte. Camb. | | | | | |
|-------------------|-----------------------|--------------------------|------------------|--------------------------------|-------------------------------|---------------------------------------|--|
| EPN: FT-TSL01 | M | odel#: 1151DP | | Serial #: 1900 | 0589 | · · · · · · · · · · · · · · · · · · · | |
| Manufacturer/Desc | ription: Rosemount/Ex | | | Location: 6"-7 200-ZP-1 Bld | 6"-TSL01-HDPE (NE Wa Bidg) | | |
| Test Equipment: | Type of Equi | pment S | Standards Number | | Cal Exp | Date | |
| | | | | | 1 | 1 | |
| | | | | | 1 | , | |
| | | | | | 1 | 7 | |
| | ***** | ******** Calibration Dat | | ********* | *** | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | | | | | |
| 6.25" wg | 8.00 mA | 7.20 to 8.80 mA | | | | | |
| 25.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | | |
| 56.25" wg | 16.00 mA | 15.20 to 16.80 mA | | | | | |
| 100.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | | | |
| | | | | | | | |
| Please Circle: | Accept | or Reject | | | - | | |
| | Accept | or Reject | | | - | | |
| <u> </u> | Accept | or Reject | | Date: | | 1 | |

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| | Syst | em Instrument (| Calibratio | on | | |
|-------------------|---------------------------|------------------------|--------------|-------------------------|-------------|---------|
| | | Data Shee | t | | | |
| | | Transmitter Calibr | ation | | | |
| EPN: PDT-F1 | Мо | del #: 1151DP | | Serial #: 194 | 8361 | |
| Manufacturer/Desc | cription: Rosemount/Influ | ent Filter (PT01 Disch | arge) | Location: 6" - Skid) | TSL02-PV | C (PT01 |
| Test Equipment: | Type of Equip | ment St | tandards Nui | mber | Cal Exp | Date _ |
| | | | | | 1 | 1 |
| | | | | | 1 | 1 |
| | | | | | 1 | 1 |
| | ********* | OUTPUT DATA | | ****** | *** | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0.0 psi | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 25.0 psi | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 50.0 psi | 20.00 mA | 19.20 to 20.80 mA | | | | |
| Please Circle: | Accept o | r Reject | | | | |
| _ | • | • | | | | |
| Comments: | | | | | | |
| _ | | | <u></u> | | | |
| Performed By: | | | | Date: | 1 | , . |
| Checked By: | | | | · | / | / |
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200W-ZP-1 Groundwater Treatment

System Instrument Calibration

Data Sheet

Transmitter Calibration

| EPN: FT-TSL02 | | Model #: 1151DP | | Serial #: 1948361 | | | |
|-------------------|-----------------------|--------------------------|------------------|-------------------------|--------------|----------|--|
| Manufacturer/Desc | cription: Rosemount/P | T01 Flow Transmitter | | Location: 6" - Skid) | TSL02-PV | C. (PT01 | |
| Test Equipment: | Type of Equ | uipment | Standards Number | | Cal Exp Date | | |
| | | | | | / | 1 | |
| | • | | | | | 1 | |
| | | | | | / | 1 | |
| | ***** | ********** Calibration D | | **** | *** | | |
| Test Input | Desired Output | | MCP | As Found | In/Out | As Left | |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | | | | | |
| 5.25" wg | 7.27 mA | 7.00 to 8.00 mA | | | | | |
| 25.0" wg | 10.53 mA | 10.00 to 11.00 mA | | | | | |
| 66.25" wg | 13.80 mA | 13 to 14.60 mA | | | | | |
| 00.0" wg | 17.06 mA | 16.20 to 17.80 mA | | | | | |
| 150" wg | 20.00 mA | 19.20 to 20.80 mA | | | | | |
| ease Circle: | Accept | or Reject | | | _ | | |
| Reason: | | | | | · | | |
| Comments; | | | | | | | |
| | | | | | | | |
| Performed By: | | | | Date: | 1 | 1 | |

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System Instrument Calibration

Data Sheet

Transmitter Calibration

| EPN: LT-T01 | Мо | Model #: 1151 DP Serial | | | al #: 1954952 | | |
|-------------------|---------------------------|-------------------------|------------|--------------|---------------|---------|--|
| Manufacturer/Desc | cription: Rosemount/Influ | ent Tank T01 Level Tra | nsmitter | Location: T0 | l (Rear of ta | nk) | |
| Test Equipment: | Type of Equip | ment Sta | ındards Nu | mber | Cai Exp | Date | |
| | | | | | / | / | |
| | | | | | | / | |
| | | | | | | / | |
| | ****** | OUTPUT DATA | **** | ****** | *** | - | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | | | | | |
| 85.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | | |
| 170.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | | | |
| Please Circle: | Accept o | r Reject | | | | | |
| Reason: | | | | | ·+ | | |
| Comments: | | | | | | | |
| - | | | | | | | |
| Performed By: | | | | Date: | / | 1 | |
| Checked By: | | | | | 1 | 1 | |

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System Instrument Calibration

| | | Data She | et | | | |
|------------------|---------------------------|---------------------------------------|----------------|----------------|----------|---------------------------------------|
| | | Transmitter Cali | bration | | | |
| EPN: LT-T02 | Mo | del #: 1151DP | | Serial #: 1954 | 1953 | |
| Manufacturer/Des | cription: Rosemount/Efflu | uent Tank T02 Level | Transmitter | Location: T02 | (NW side | of tank) |
| Test Equipment: | Type of Equip | ment | Standards Nu | mber | Cal Exp | Date |
| | | | | | | 1 |
| | | | | | | |
| | | | | | / | 1 |
| | ******* | ******** Calibration D | ata ********** | **** | *** | |
| | | OUTPUT DA | TA | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 85.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 170.0" wg | 20.00 mA | 19.20 to 20.80 mA | \ | | - | |
| Please Circle: | Accept o | r Reject | | | Ē | |
| Reason: | | | | ··· | | · · · · · · · · · · · · · · · · · · · |
| Comments: | | · · · · · · · · · · · · · · · · · · · | | | | |
| Performed By: | | | | Date: | | |
| Checked By: | | <u></u> | <u></u> | - , | | |
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System Instrument Calibration

200W-ZP-1 Groundwater Treatment

| | Syst | em monument c | alibi atit | 711 | | |
|------------------------|-------------------------|---------------------------|--|----------------|----------|---|
| | | Data Sheet | t | | | |
| | | Transmitter Calibra | ation | | | |
| EPN: LT-V01 | Mo | del #: GEMS P/N 8006 | 46 | Serial #: 7637 | 35 | |
| Manufacturer/Desc | cription: GEMs/Stripper | Tower V01 Level Transr | nitter | Location: V0 | 1 | |
| Test Equipment: | Type of Equip | oment St | andards Nu | mber | Call Exp | / Date |
| | ******* | ******** Calibration Data | | **** | 产 | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | WICE | As Found | iii/Out | AS Leit |
| 56.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | - | <u> </u> |
| 112.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | | |
| Please Circle: Reason: | Accept o | r Reject | | | | |
| Comments: | | | | | | |
| Performed By: | | | | Date: | 1 | 1 |
| Checked By: | | | | | / | / |

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System Instrument Calibration

Data Sheet

Transmitter Calibration

| EPN: PDT-F2 | N | lodel #: 1151DP | | Serial #: 1941 | 1360 | |
|---------------------------------------|-----------------------|-------------------------|----------------|----------------|------------|-----------|
| Manufacturer/Desc (PE02 Discharge) | ription: Rosemount/In | luent D.H. Pressure Tra | nsmitter | Location: 6" - | 101-PVC (P | 101 Skid) |
| Test Equipment: | Type of Equ | ipment S | tandards Nui | nber | Cal Exp | Date |
| | | | | | | 1 |
| | | | | | | 1 |
| | | | | | | 1 |
| | | OUTPUT DATA | - r | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | in/Out | As Left |
| 0.0" psi . | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 25.0 psi | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 50.0 psi | 20.00 mA | 19.20 to 20.80 mA | | | | |
| Please Circle: | Accept | or Reject | | | | |
| Reason: | | | | | | |
| | | | | | | |
| Comments: — | | | | | | |
| | | | | | | |
| Comments: Performed By: Checked By: | | | | Date: | | |

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System Instrument Calibration

| | | Data She | o.t | | | |
|-------------------|--------------------------|-----------------------------|---------------|----------------|------------|-----------|
| | | Data Site Transmitter Calil | | | Ŧ | - |
| | | | | | | |
| EPN: FT-I11 | Mo | odel#: 1151DP | | Serial #: 1900 | 0605 | |
| Manufacturer/Desc | cription: Rosemount/Bull | k Effluent Flow Trans | mitter | Location: 6" - | 101-PVC (F | 101 Skid) |
| Test Equipment: | Type of Equip | oment | Standards Nui | mber | Cal Exp | Date |
| | ,, ,, | | | | , | 1 |
| | | - | | | | 1 |
| | | | | ·-··· | | 1 |
| | | | | | · | - |
| | *********** | ******* Calibration D | ata ******** | ****** | *** | |
| | | | | | | |
| | | OUTPUT DA | ГА | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | in/Out | As Left |
| 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 6.25" wg | 8.00 mA | 7.20 to 8.80 mA | | | | <u> </u> |
| 25.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | |
| 56.25" wg | 16.00 mA | 15.20 to 16.80 mA | | | | |
| 100.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | | |
| Please Circle: | Accept c | or Reject | | | | |
| | | | | | | <u></u> |
| Comments: | | | | | - | |
| | | | | | | |
| _ | | | | | | |
| Performed By: | | | | Date: | 1 | , |
| Checked By: | | | •• | - | | |
| | | | | • | | |

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System Instrument Calibration

Data Sheet

| Calibration Data ********************************** | | | Data Sneet | | | | |
|--|-------------------|-------------------------|------------------------|-----------|----------------------------------|-----------------|--------------|
| Manufacturer/Description: Rosemount/Inj. Well INJ01 Flow Transmitter | | | Transmitter Calibra | tion | | | |
| Test Equipment: Type of Equipment Standards Number Cal Exp Date // / // / // / // / // / // / // / / | EPN: FT-I01 | Мо | del#: 1151DP | | Serial #: 1898 | 3718-04 | |
| | Manufacturer/Desc | ription: Rosemount/Inj. | Well INJ01 Flow Transm | nitter | Location: 3" - Manifold Bldg) | 102-HDPE () | (Inj. |
| | Test Equipment: | Type of Equip | oment Sta | ndards Nu | mber | Cai Exp | Date |
| | | | | | | / | 1 |
| Calibration Data Calibration | | | | | | / | 1 |
| Test Input Desired Output Tolerance MCP As Found In/Out As Let | | | | | | 1 | 1 |
| 0.0" wg | | | OUTPUT DATA | | | | |
| 6.25" wg | Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 25.0" wg 12.00 mA 11.20 to 12.80 mA 56.25" wg 16.00 mA 15.20 to 16.80 mA 100.0" wg 20.00 mA 19.20 to 20.80 mA 19.20 to 2 | 0.0" wg | 4.00 mA | 3.20 to 4.80 mA | | | | |
| 56.25" wg 16.00 mA 15.20 to 16.80 mA 100.0" wg 20.00 mA 19.20 to 20.80 mA 19.20 to 2 | 6.25" wg | '8.00 mA | 7.20 to 8.80 mA | | | | |
| 100.0" wg 20.00 mA 19.20 to 20.80 mA | 25.0" wg | 12.00 mA | 11.20 to 12.80 mA | | | | |
| lease Circle: Accept or Reject Reason: Comments: Performed By: Date: / / | 56.25" wg | 16.00 mA | 15.20 to 16.80 mA | _ | | | |
| Reason: Comments: Performed By: Date: / / | 100.0" wg | 20.00 mA | 19.20 to 20.80 mA | | | <u> </u> | <u> </u> |
| Comments: Performed By: Date: / / | Please Circle: | Accept o | or Reject | | | | |
| Performed By: Date: / / | Reason: | | | | | | |
| Performed By: Date: / / | | | | | | | |
| , one made 5). | Comments: | | | | | | |
| , one made 5). | _ | | | | | | |
| Checked By: / / | Performed By: | | | | Date: | , , | 1 |
| | Checked By: | | | | - - | | 1 |

EPN:

PSH-01

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System Instrument Calibration

Data Sheet

Process Activated Switch Calibration Test Record

| Mfgr | ASCC | TRIPOIN | T N | /lodel No. | N/A | | Serial No |). <u>A</u> | 425927 |
|---------------|--------------|--------------|-------------|--------------|---------------|--------------|--------------|-------------|-----------|
| Range | 0 -100 |) psig* | L | ocation. | PT01 Skid | | - | } | - |
| Test Equ | ipment: | • | Type of Equ | ıipment | Stan | ndards Numbe | ıſ | Cal | Exp Date |
| | | _ | | | | | <u> </u> | | 1 1 |
| | | _ | | | | | | | / / |
| Readout | Туре: | | | | ····· | | | | |
| | | | | | | | | | |
| | * 10.15.00 | | | Sw | itch Data | | | | |
| Test Input | Set @ | As- Found | As-Left | Tolerance | Test Input | Reset @ | As- Found | As- Left | Tolerance |
| | 75,0 psig | | | ± 5 psig | | 53.0 psig | | | ± 5 psig |
| | | | | | | | | | |
| | | | | | | | | | |
| lease ma | ke appropr | iate selecti | on | ☐ Accept | □Re | eject | | | |
| Remarks | : | Opens on | Raise, Clo | oses on Fall | | <u> </u> | | | |
| | | | | | | | | | |
| Performe | d By: | | | | | | Date: | | 1 1 |
| Checked | By: | | | | | | Date: | | 1 1 |

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System Instrument Calibration

Data Sheet

Process Activated Switch Calibration Test Record

| EPN: | PSH- | 02 | | | | | | | |
|----------------------|-------------------------|--------------|-------------------|----------------------------|---------------|-----------|--------------|------------------|-----------|
| Mfgr | ASC | TRIPOIN | T N | Model No. | N/A | | Serial No |). <u>A</u> | 425927 |
| Range | 0 - 10 | 0 psig * | L | ocation - | Pl01 Skid | | - - | | |
| Test Equ | Test Equipment: Type of | | Type of Equ | Equipment Standards Number | | er | Cal | Exp Date / / / / | |
| Readout | Туре: | | | | | | | | |
| | | | | Swit | ch Data | | | | |
| Test input | Set @ | As- Found | As-Left | Tolerance | Test Input | Reset @ | As- Found | As- Left | Tolerance |
| | 75.0 psig | | | ± 5 psig | | 52,4 psig | | | ± 5 psig |
| | | | | | | | | | |
| | | | | | | | | | |
| | | L | <u> </u> | <u> </u> | B | <u> </u> | | | |
| | ke appropr | | | ☐ Accept | □Re | ject | | | |
| Please ma Remarks | | | on Raise, Clos | | □Re | ject | | | |
| | *(| | | | □ Re | ject | Date: | | 1 1 |

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System Instrument Calibration

Data Sheet

Process Activated Switch Calibration Test Record

| Mfgr Range UE Model No. Ucation J402 Serial No. 9612 Test Equipment: Type of Equipment Standards Number Cal Exp Date / / / / / / / / Readout Type: Switch Data Test Input Set @ Found As-Left Tolerance Input Reset @ Found Left Tolerance Fill in data below for PSL-TSA01: 20" Fill in data below for PSH-TSA01: Please make appropriate selection □ Accept □ Reject Remarks: *PSLCloses on Raise. Opens on Fall. PSH Opens on Raise, Closes on Fall. Performed By: Date: / / Checked By: Date: / / | EPN: | PSHL-T | rsa01 | | | | | | | | |
|---|----------|---------|-------------|------------|--------------------|-------------|--------------|-------------|-------------|------|---------|
| Test Equipment: Type of Equipment Standards Number Cal Exp Date / / / / / / / / / / / / / / / / / / / | Mfgr | UE | | 1 | Model No. | J402 | | Serial No | o | 9612 | |
| | Range | 0-20 ps | ig (*See no | ote) | Location | Stripper S | kid | - | | | - |
| | Test Equ | ipment: | _ | Type of Eq | uipment | Star | edards Numbe | er | | 1 | / |
| Switch Data Test Input Set @ As- Found As-Left Tolerance Input Reset @ Found Left Tolerance Fill in data below for PSL-TSA01: 28.9" | | | | | | | | | | | |
| Switch Data Test Input Set @ Found As-Left Tolerance Input Reset @ Found Left Tolerance Fill in data below for PSL-TSA01: 28.9" | Readout | Туре: | | | | | | | | | _ |
| Test Input Set As-Found As-Left Tolerance Input Reset As-Found Left Tolerance Fill in data below for PSL-TSA01: 28.9" | | | | | | | | | | | |
| Test Input Set As-Found As-Left Tolerance Input Reset As-Found Left Tolerance Fill in data below for PSL-TSA01: 28.9" | | | ···· | | S'A | | | | | | |
| Input Set @ Found As-Left Tolerance Input Reset @ Found Left Tolerance | | | T | 1 | SWIRE | | l , | | | 1 | |
| Performed By: 28.9" 20" Fill in data below for PSH-TSA01: 63.5" 63.5" Reject Performed By: Date: / / | | Set @ | | As-Left | Tolerance | | Reset @ | | | То | lerance |
| Fill in data below for PSH-TSA01: 72.3" 63.5" Please make appropriate selection | | | | | Fill in data belo | w for PSL-T | TSA01: | | | | |
| Please make appropriate selection | | 28.9" | | | | | 20″ | | | | |
| Please make appropriate selection | | | | | Fill in data below | v for PSH-ī | SA01: | | | | - |
| Remarks: *PSLCloses on Raise. Opens on Fall. PSH Opens on Raise, Closes on Fall. Performed By: Date: / / | | 72.3" | | · | | | 63,5" | | | | |
| | | | | | | | | e, Closes c | n Fall. | | |
| | | | | | | | | | | | |
| | Performe | d By: | | | | | | Date: | | 1 | 1 |
| | | · - | | | | | | Date: | | 1 | / |

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System Instrument Calibration

Data Sheet

| EPN: PI-F1A | | Model #: N/A | | Serial #: N/A | | |
|--------------------------------|-------------------------|------------------------------|--------------|-------------------------|----------|-----------------------|
| Manufacturer/Desc Indicator | ription: Ashcroft/Influ | ent Filter F-1A Outlet Pre | essure | Location: 6" - Skid) | TSL02-PV | C. (PT01 ⁻ |
| Test Equipment: | Type of Eq | uipment S | Standards Nu | mber | Cal Exp | Date |
| | | | | | 1 | 1 |
| | | | | | 1 | 1 |
| | | | | | | 1 |
| | ****** | ************* Calibration Da | ta ******** | ******** | *** | |
| | | OUTPUT DAT | Α | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | ln/Out | As Left |
| 0.00 psig | 0.00 psig | (+)1 psig; (-)0 psig | | | | |
| 40.00 psig | 40.00 psig | ±3 psig | | | | |
| 80.00 psig | 80.00 psig | ±3 psig | | | | |
| 120.00 psig | 120.00 psig | ±3 psig | | | | |
| 160.00 psig | 160.00 psig | ±3 psig | | | | |
| Please Circle: Reason: | Accept | or Reject | | | - | |
| Comments: | | | | | | |
| Performed By: | | | <u>.</u> | Date: | .1 | 1 |
| Checked By: | | | | - | | |

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System Instrument Calibration

Data Sheet

| EPN: PI-F1B | M | lodel#: N/A | | Serial #: N/A | | |
|--------------------------------|---------------------------|---------------------------|--------------|------------------------|------------------|----------|
| Manufacturer/Desc Indicator | cription; Ashcroft/Influe | nt Filter F-1A Outlet Pre | essure | Location: 6"- Skid) | - TSL02-PV0 - | C. (PT01 |
| Test Equipment: | Type of Equ | ipment S | Standards Nu | mber | Cal Exp | Date |
| | | | | | / | / |
| | | | | | / | 1 |
| | | | | | 1 | 1 |
| | ******* | ********* Calibration Da | ta ****** | ***** | *** | |
| | | OUTPUT DAT | Ά | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 0.00 psig | 0.00 psig | (+)1 psig; (-)0 psig | · | | | |
| 40.00 psig | 40.00 psig | ±3 psig | | | | |
| 80.00 psig | 80.00 psig | ±3 psig | | | | |
| 120.00 psig | 120.00 psig | ±3 psig | | | | |
| 160.00 psig | 160.00 psig | ±3 psig | | | | |
| Please Circle: | Accept | or Reject | | | | |
| Reason: | | | | | | - |
| Comments: | | ··· | | | | |
| _ | | | | | | |
| Performed By: | | | | Date: | .1 | 1. |
| Checked By: | | | | <u></u> | | / |
| | | | | | | |

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System Instrument Calibration

Data Sheet

| | | | | | | |
|--------------------------------|-------------------------|--|--------------|---------------------------------------|---------|-------------|
| EPN: PI-TSA01 | 1 | Model #: 1279 | | Serial #: NA | | |
| Manufacturer/Desc Indicator | ription: Ashcroft/Air B | lower B01 Discharge | Pressure | Location: 10" (Stripper Town | | |
| Test Equipment: | Type of Eq | uipment | Standards Nu | ımber | Cal Exp | Date |
| | | | | | 1 | 1 |
| | | | | | | 1 |
| | | | | | 1. | 1 |
| | ********** | ************ Calibration | | ******* | ** | · · · · · · |
| Test Input | Desired Output | ··· , ··· ··· ·· · · · · · · · · · · · | MCP | As Found | In/Out | As Left |
| 0.0 psig | 0.0 psig | ±0.5 psig | | | | |
| 2.5 psig | 2.5 psig | ±0.5 psig | | | | |
| 5.0 psig | 5.0 psig | ±0.5 psig | | · · · · · · · · · · · · · · · · · · · | | |
| | 1 1 | ±0.5 psig | | | | |
| Please Circle: Reason: | Accept | | i | | | |

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System Instrument Calibration

| | , | | | | | |
|----------------|-------------------------|--|----------------|-------------------------------|----------|----------|
| | | Data Sh | eet | | | |
| | Fie | d-Installed Anal | og Indicators | | | |
| | | | | | | |
| EPN: PI-TSL03 | Mo | del #: 1188 | | Serial #: NA | | |
| Manufacturer/D | escription: Ashcroft/PT | 03 Discharge | | Location: 6" (Stripper Tov | | |
| Test Equipment | : Type of Equi | pment | Standards No | umber | Cal Ex | p Date |
| | | | | | | 1 |
| | | | | | | / |
| | | | | | | 1 |
| | | | | | | |
| 大大 夫 | **************** | **** Calibration | Data ********* | ********** | ***** | |
| | | OUTPUT D | ATA | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0.0 psig | 0.0 psig | ±3 psig | | | | |
| 15 psig | 15 psig | ±3 psig | | | | |
| 30 psig | 30 psig | ±3 psig | | | | |
| 45 psig | 45 psig | ±3 psig | | | <u> </u> | |
| 60 psig | 60 psig | ±3 psig | | | | <u> </u> |
| Please Circle: | Accept o | r Reject | | | | |
| Reason: | | | | | | |
| | | ······································ | | | | |
| Comments: | | | <u> </u> | | | |
| | | | | | | |
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| Performed By: | | | | Date: | | |
| Checked By: | | | | | | |

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System Instrument Calibration

Data Sheet

| Course C | | | Serial #: NA | | #: 1188 | Mod | EPN: PI-I01 |
|--|----------|-------------|--|-------------|---------------------|--------------------------|-----------------------|
| Court Cour | (PI01 | T012-PVC. (| | ator | harge Process Indic | otion: Ashcroft/Pl01 Dis | Manufacturer/Descript |
| OUTPUT DATA Test Input Desired Output Tolerance MCP As Found In/Out 0.0 psig | Date | Cal Exp | mber | andards Nur | ent S | Type of Equipn | Test Equipment: |
| OUTPUT DATA | | | | | | | |
| OUTPUT DATA Test Input Desired Output Tolerance MCP As Found In/Out 0.0 psig ±5psig = 5psig = 5psig <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> | | | | | | - | |
| Test Input Desired Output Tolerance MCP As Found In/Out 0.0 psig 0.0 psig ±5psig 25 psig 25 psig ±5 psig 50 psig 50 psig ±5 psig 75 psig 75 psig ±5 psig 100 psig 100 psig ±5 psig Please Circle: Accept or Reject Reason: | | / | | | | | |
| 10.0 psig 0.0 psig ±5psig 25 psig 25 psig ±5 psig 50 psig 50 psig ±5 psig 75 psig 75 psig ±5 psig 100 psig 100 psig ±5 psig Please Circle: Accept or Reject Reason: | | | <u></u> | | OUTPUT DATA | | |
| 25 psig | As Left | In/Out | As Found | МСР | Tolerance | Desired Output | Test Input |
| 50 psig 50 psig ±5 psig | | | | | ±5psig | 0.0 psig | 0.0 psig |
| 75 psig | <u> </u> | | | | ±5 psig | 25 psig | 25 psig |
| 100 psig 100 psig ±5 psig Please Circle: Accept or Reject Reason: | <u> </u> | | | | ±5 psig | 50 psig | 50 psig |
| Please Circle: Accept or Reject | <u> </u> | | | | ±5 psig | 75 psig | 75 psig |
| Reason: | <u></u> | | <u> </u> | <u>]</u> | ±5 psig | 100 psig | 100 psig |
| | | £. | | | Reject | Accept o | Please Circle: |
| | | | | | | | Reason: |
| Comments: | | | | | | | |
| | | | | | | | Comments: |
| | | | | | - | | |
| Date: / | 1 | , | Date: | | | | |
| Performed By: Checked By: / | | | _ | | | | |

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System Instrument Calibration

Data Sheet

| | F | ield-Installed Analo | g Indicators | | | |
|--------------------------------|----------------------------|-------------------------|---------------------------------------|--------------|--------------|---------------------------------------|
| EPN: PI-F2A | Mo | odel #: 45-1279-S-04 | L | Serial #: NA | | <u>-</u> |
| Manufacturer/Desc Indicator | cription: Ashcroft/Effluen | t Filter F-2A(2B) Inlet | Pressure | Location: 6" | · 101-PVC (P | 101 Skiď) |
| Test Equipment: | Type of Equip | oment | Standards Nu | mber | Cal Exp | Date |
| | | | | | 1 | 1 |
| | | | | | / | 1 |
| | | | | | 1 | 1 |
| | | OUTPUT DA | TA | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0.00 psig | 0.00 psig | ± 5 psig | | | | |
| 40.00 psig | 40.00 psig | ± 5 psig | | | | |
| 80,00 psig | 80.00 psig | ± 5 psig | | | | |
| 120.00 psig | 120.00 psig | ± 5 psig | | | | |
| 160.00 psig | 160 psig | ± 5 psig | | | | |
| Please Circle: | Accept c | r Reject | | | | |
| Reason: | | | | | | |
| | | | | | | |
| Comments: | | · | | | | |
| | | ····· | · · · · · · · · · · · · · · · · · · · | | | |
| Performed By: | | | | Date: | , | , |
| Checked By: | | | | | 1 | |
| ··· — | | | | • . | - | · · · · · · · · · · · · · · · · · · · |

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System Instrument Calibration

Data Sheet

| EPN: PI-F2B | Mo | odel #: 45-1279-S-0 | 4L | Serial #: NA | | | |
|--------------------------------|----------------------------|----------------------|--|----------------|--------------|-----------|--|
| Manufacturer/Desc Indicator | oription: Ashcroft/Effluer | nt Filter F2A(2B) Ou | tiet Pressure | Location: 6" - | 102-PVC (P | 101 Skid) | |
| Test Equipment: | Type of Equi | oment | Standards Nu | mber | Cal Exp Date | | |
| | | | | | 1 | 1 | |
| | | | | | / | / | |
| | | | | | 1 | 1_ | |
| | ***** | Calibration | Data *********************************** | ******* | *** | | |
| | | OUTPUT D | ΔΤΔ | , . | | | |
| Test input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 0,00 psig | 0.00 psig | ± 5 psig | | | | | |
| 40.00 psig | 40.00 psig | ± 5 psig | | | | | |
| 80.00 psig | 80.00 psig | ± 5 psig | | | | | |
| 120.00 psig | 120.00 psig | ± 5 psig | | | | | |
| 160.00 psig | 160 psig | ± 5 psig | | | | | |
| lease Circle: Reason: | Accept | or Reject | | | ÷ | | |
| Comments: | | | | | | | |
| | | | | Date: | , | 1 | |
| Performed By: | | | | | ′ | , | |

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System Instrument Calibration

Data Sheet

| | EPN: PI-TSA03 | 1 | Model #: 1188 | | Serial #: NA | | |
|--|-----------------|---|-----------------------|--------------|--------------|-------------|---------|
| | | cription: Ashcroft/GAC | Canister Bulk Inlet P | ressure | | | |
| | Test Equipment: | Type of Eq | uipment | Standards Nu | ımber | Cal Exp | Date |
| | | | | | | 1 | 1 |
| Calibration Data Calibration | | • | | | | | 1 |
| Test input Desired Output Tolerance MCP As Found In/Out As | | | | | | | 1 |
| 0.00" wg | | ***** | | | ******* | *** | |
| 20.00" wg | Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 40.00" wg | 0.00" wg | 0.00" wg | ± 2" wg | | | | |
| 60.00" wg | 20.00" wg | 20.00" wg | ± 2" wg | | | | |
| Please Circle: Accept or Reject Reason: Comments: | 40,00" wg | 40.00" wg | ± 2" wg | | | | |
| Reason: Comments: | 60.00" wg | 60.00" wg | ± 2" wg | | | | |
| Comments: | Please Circle: | Accept | or Reject | | | =- | |
| | Reason: | | | <u>,,</u> | | | |
| Performed By: Date: / / | Comments: | | | | | | |
| Performed By: Date: / / | - | , | | | Data | | |
| Checked By: | • | | <u> </u> | | - Date; | | - |

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System Instrument Calibration

Data Sheet

| | Fi | eld-installed Anaid | og Indicators | | | |
|---------------------------------|---|-----------------------------|---------------|-------------------------------|---------|------------|
| EPN: PI-TSA05 | Мо | Model #: 1188 Serial #: N/A | | | | |
| Manufacturer/Desci Indicator | ription: Ashcroft/GAC Canister Bulk Outlet Pressure | | | Location: 10" GAC Canister | | |
| Test Equipment: | Type of Equip | ment - | Standards Nu | mber | Cal Exp | Date _ / / |
| | | OUTPUT DA | ATA | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0,00" wg | 0.00" wg | ± 2" wg | | | | |
| 20.00" wg | 20.00" wg | ± 2" wg | | | | |
| 40.00" wg | 40.00" wg | ± 2" wg | | | | |
| 60.00" wg | 60.00" wg | ± 2" wg | | | | |
| Please Circle: Reason: | Accept o | r Reject | | | ia. | |
| Comments: | | | | | | |
| Performed By: | | | | _ Date: | | |
| Checked By: | | | | _ | . / | |

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System Instrument Calibration

| | | Data She | eet | | | |
|-------------------|--------------------------|-----------------------|--------------|--------------------------------|------------|---------|
| | Fi | eid-Installed Analo | g Indicators | | | |
| EPN: PI-TSA04 | Mo | del #: 1188 | | Serial #: NA | <u>w</u> - | |
| Manufacturer/Desc | ription: Ashcroft/V02H (| Outlet Pressure Indic | eator | Location: 6"- Canister Over | | |
| Test Equipment: | Type of Equip | oment | Standards Nu | ımber | Cai Exp |) Date |
| | | | | <u>.</u> | / | 1 |
| | | | | | | |
| | | | | | | 1 |
| | | | | | | |
| | | OUTPUT DA | ATA | | | <u></u> |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 0.00" wg | 0.00" wg | ± 2" wg | | | | |
| 20.00" wg | 20.00" wg | ± 2" wg | | | | |
| 40.00" wg | 40.00" wg | ± 2" wg | | | | |
| 60.00" wg | 60.00" wg | ± 2" wg · | | |] | |
| Please Circle: | Accept c | or Reject | | | | |
| Reason: | | | | | ¥- | |
| _ | | | | | | |
| Comments: | | | | <u> </u> | _ | |
| | | | | | | |
| | | | | | | |
| Performed By: | | | | Date: | | |
| Checked By: | | | | _ | | |
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System Instrument Calibration

| | Fi | Data Sh | | | | |
|-----------------|-------------------------|--------------|--------------|---------------------------------|---------------------------------------|----------------|
| EPN: PI-TSA07 | | odel #: 1188 | | Serial #: NA | | ì |
| | cription: Ashcroft/V02B | | icator | Location: 6"-7 Canister Over | rsa07-PVC head Piping | (In GAC) - |
| Test Equipment: | Type of Equip | oment | Standards Nu | mber | Caĭ Exp / / | |
| | , | OUTPUT D | ATA | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 0.00" wg | 0.00" wg | ± 2" wg | | | | |
| 20.00" wg | 20.00" wg | ± 2" wg | | | | |
| 40.00" wg | 40.00" wg | ± 2" wg | | | | |
| 60,00" wg | 60.00" wg | ± 2" wg | | | | |
| Please Circle: | Accept c | or Reject | | | - | |
| Reason: | | | | | | |
| Comments: | | | | | · · · · · · · · · · · · · · · · · · · | |
| Performed By: | | | | Date: | . 1 | 1 |
| Checked By: | | · | | | | 1 |

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| | | | y malcalors | | | | |
|------------------------|-------------------------|---------------------|--------------|---|--------------|----------|--|
| EPN: FI-TSA01 | Mo | odel #: 2000-00AV | | Serial #: NA | Serial #: NA | | |
| Manufacturer/Desc | ription: Dwyer/Air Blow | er B01 Discharge Fl | ow Indicator | Location: 10"-TSA01-PVC (Strip Tower V01 Skid) | | | |
| Test Equipment: | Type of Equipment | | Standards Nu | mber | Cal Exp | Date | |
| | | | | | | 1 | |
| | | | | | 1 | 1 | |
| | | | | | 1 | 1 | |
| | *********** | OUTPUT D | | | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | ln/Out | As Left | |
| 0.00" H2O | 0.00" H2O | ± 0.05" H2O | | | | | |
| 0.10" H2O | 0.10" H2O | ± 0.05" H2O | | | | | |
| 0.15" H2O | 0.15" H2O | ± 0.05" H2O | | | | | |
| 0.20" H2O | 0.20" H2O | ± 0.05" H2O | | | | | |
| 0.25" H2O | 0.25" H2O | ± 0.05" H2O | | <u> </u> | <u></u> | <u> </u> | |
| Please Circle: Reason: | Accept | or Reject | | | | | |
| Comments: | | | | | | | |
| Performed By: | | | | Date; | | | |
| Checked By: | | | | | 1 | 1 | |

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Data Sheet

| Manufacturer/Description: Dwyer/Stripper Tower V01 Diff. Pressure Location: Stripper Tower V01 | EPN: PDI-V01 | Mo | del #: 200-00AV | | Serial #: NA | | |
|--|-----------------|--------------------------|----------------------|--------------|----------------|---------------------------------------|--------------|
| | | cription: Dwyer/Stripper | Tower V01 Diff. Pres | ssure | Location: Stri | oper Tower | V01 |
| | Test Equipment: | Type of Equip | pment | Standards Nu | mber | Cal Exp | Date . |
| | | · | | | | | |
| Calibration Data Calibration | | • | . | | | | |
| Dutput Data Test Input Desired Output Tolerance MCP As Found In/Out As Left D.00° H2O D.50° H2O ± 0.10° H2O D.50° H2O D.50° H2O ± 0.10° H2O D.10° H2O D.10 | | | | | | | / |
| 0.00° H2O | | | OUTPUT DA | ATA | | | |
| 0.50" H2O | Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Lef |
| 1.10" H2O | 0.00" H2O | 0.00" H2O | ± 0.10" H2O | | | | ļ |
| 1.50" H2O | 0.50" H2O | 0.50" H2O | ± 0.10" H2O | | | | ļ |
| 2.00" H2O | | | | | | | |
| ease Circle: Accept or Reject Reason: Comments: Performed By: Date: / / | | | <u> </u> | | | | |
| Reason: Comments: Performed By: Date: / / | 2.00" H2O | 2.00" H2O | ±0.10" H2O | | | | |
| Performed By: Date: / / | | Accept | or Reject | | | | |
| Performed By: Date: / / | | | | | | · · · · · · · · · · · · · · · · · · · | |
| | Comments: | | | | | | |
| | | | | | - · | | |
| | Performed By: | | | | Date: | | |

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System Instrument Calibration

Data Sheet

| | | MCP-Installed Digital Inc | dicators | | | | |
|-----------------|--------------------------|-----------------------------|-----------|--------------|--------------|---------|--|
| EPN: FI-E1 | N | lodel #: IPM | <u></u> | Serial #: NA | Serial #: NA | | |
| Manufacturer/De | scription: Red Lion Cont | rols/Extraction Well Flow I | ndicator | Location: MC | P (left door |) | |
| Test Equipment: | Type of Equ | ipment Sta | ndards Nu | mber | Cal Ex | | |
| | | | | | / | / | |
| | | | | | | / | |
| | | | | | | 1 | |
| | | OUTPUT DATA | | | | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 4.00 mA | 0.00 gpm | (+) 3 gpm; (-) 0 gpm | | | | | |
| 12.00 mA | 75.00 gpm | 72 to 78 gpm | <u> </u> | | | | |
| 20.00 mA | 150.00 gpm | 147 to 153 gpm | | <u></u> | | | |
| Please Circle: | Accept | or Reject | | | | | |
| Réason: | | | | | | | |
| Comments: | Extraction wells share a | a common flow indicator. | | | | | |
| | | | | | | | |
| Performed By: | | | | Date: | . 1 | 1 | |
| Checked By: | | | | | IJ | 1 | |



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System Instrument Calibration

Data Sheet

MCP-Installed Digital Indicators

| EPN: LI-E1 | 1 | /lodel# IPM | | Serial #: NA | | |
|-------------------------|------------------------|-------------------------|----------------|--------------|---------------|---------|
| Manufacturer/Desc | cription: Red Lion Con | trols/Extraction Well L | evel Indicator | Location: MC | P (left door) | |
| Test Equipment: | Type of Equ | uipment | Standards Nu | mber | Cal Exp | Date |
| | • | | | | 1 | 1 |
| | | | | | 1 | 1 |
| | | | • | | / | 1 |
| | | OUTPUT DA | · | | | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 4.00 mA | 0.00 ft | (+) 3 ft; (-) 0ft | | | | |
| 12.00 mA | 58.00 ft | ± 3,00 ft | | | | |
| 20.00 mA | 115.50 ft | ± 3,00 ft | | | · | |
| ease Circle: Reason: | Accept | or Reject | | | | |
| Comments: | Extraction wells share | a common level indica | ator. | | | |
| _ | | | | , | | |
| – Performed By: | | | | Date: | <u>.</u> / | 1 |



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System Instrument Calibration

| | | Data | Sheet | | | |
|------------------------------------|--------------------------------|---------------------|---------------------|--------------|--------------|---------|
| | | MCP-Installed [| Digital Indicators | | | |
| EPN: TI-T01 | <u> </u> | Model#: IPM | | Serial #: NA | | |
| Manufacturer/De Temperature Ind | scription: Red Lion C cator | ontrois/Ti-T01 (T02 |) Tank | Location: MC | CP (Center d | oor) |
| Test Equipment: | Type of E | Equipment | Standards Nu | mber | Cal Exp | Date / |
| | | | | | | |
| · | **** | | ion Data ********** | ******** | *** | |
| Test Input | Desired Outp | | T DATA | | 1.0.4 | T |
| 0.00°F | 0.00°F | ± 3°F | ce MCP | As Found | In/Out | As Left |
| 60.00°F | 60.00°F | ±3°F | | | | ļ——— |
| 110°F | 110°F | ± 3°F | | | | |
| Please Circle: | Accept | or Reje | ct | | = | |
| | | | | | | |
| Comments: | Use TRANSMATIO | N TE Type "J" simu | lator. | | | |
| | | | | | | |
| Performed By: | | | | Date: | 1 | 1 |
| Checked By: | | | | - | 1 | 1 |

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System Instrument Calibration

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MCP-Installed Digital Indicators

| EPN: FI-TSL01 | Mo | del#: IPM | | Serial #: NA | | |
|---|---|--------------------------|--------------|--------------|-------------|-----------|
| Manufacturer/Desc Flows/Outflows (Fl | cription: Red Lion Contro -TSL01, FI-I1D indicator | ols/Liquid Phase In) | | Location: MC | P (Center d | oor) |
| Test Equipment: | Type of Equip | ment | Standards Nu | mber | Cal Exp | Date |
| | | | | | / | 1 |
| | | | | | / | 1 |
| | | | | | / | 1 |
| | ***** | | | **** | *** | |
| | 1 | OUTPUT D. | | A - 5 1 | 1-10-4 | 0 - 1 -64 |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 4,00 mA | 0.00 gpm | ± 5 gpm | | | | <u> </u> |
| 8.00 mA | 75.00 gpm | ± 5gpm | | | | |
| 12.00 mA | 156.00 gpm | ± 5gpm | | | | |
| 16.00 mA | 225.00 gpm | ± 5 gpm | | <u> </u> | | |
| 20.00 mA | 300.00 gpm | ±5 gpm | | | <u> </u> | |
| Please Circle: | Accept c | or Reject | | | | |
| Reason: | | | | | | |
| | | | | | | |
| _ | | | | | | |
| Comments: | | | | | | |
| Comments: | | | | | | |
| Comments: | | | | | | |
| Comments: Performed By: | | | | Date: | ı | |

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System Instrument Calibration

Data Sheet

MCP-Installed Digital Indicators

| EPN: PDI-F1 | ٨ | /lodel#: IPM | | Serial #: NA | | |
|---|------------------------|--------------------------|----------------|--------------|--------------|---------|
| Manufacturer/Desc (F1, F2) Indicator | cription: Red Lion Con | trols/F1 Filter Differer | ntial Pressure | Location: MC | P (Center d | oor) |
| Test Equipment: | Type of Equ | uipment | Standards Nu | mber | Cal Exp Date | |
| | | | | | . 1 | 1 |
| | • | | | | | 1 |
| | | | | | 1 | / |
| | **** | OUTPUT D | | ****** | ** | |
| Test input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 4.00 mA | 0.00 psid | ± 3 psid | | | | |
| 8.00 mA | 12.50 psid | ± 3 psid | | | | |
| 12.00 mA | 25.00 psid | ± 3 psid | | | | |
| 16.00 mA | 37.50 psid | ± 3 psid | | | | |
| 20.00 mA | 50.00 psid | ± 3 psid | | | | |
| Please Circle: Reason: | Accept | or Reject | | | | |
| Comments: | | | | | | |
| Performed By: | | | | Date: | 1 | 1 . |
| Checked By: | | | | _ | | 1 |

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System Instrument Calibration

Data Sheet

| EPN: TI-C01 | 01 Model #: IPM | | | Serial #: NA | | | |
|--------------------------------|--------------------------|-------------------------------|--------------|--------------|---------------------------------------|-------------|--|
| Manufacturer/Desc Indicator | ription: Red Lion Contro | ols/Chiller Outlet Ter | mperature | Location: MC | P (Right doo | or) - - | |
| Test Equipment: | Type of Equip | ment | Standards Nu | mber | Cal Exp Date | | |
| | | | | | 1 | 1 | |
| | | | | | 1 | 1 | |
| | ····· | | | | | 1 | |
| Marie 1 | *** | ******* Calibration OUTPUT D. | | ******* | *** | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 4.00 mA | (-) 20.00°F | ± 5°F | INIOI | Asiound | 11,001 | 7.5 25.1 | |
| 8,00 mA | 55.00°F | ±5°F | | | · · · · · · · · · · · · · · · · · · · | | |
| 12.00 mA | 85.00°F | ±5°F | | | | | |
| 16.00 mA | 115.00°F | ±5°F | | | | | |
| 20.00 mA | 150.00°F | ±5°F | | | | | |
| Please Circle: Reason: | Accept c | or Reject | | | | | |
| Comments: | | | | | | | |
| Performed By: | | | | Date: | | / | |
| Checked By: | | | | <u> </u> | | 1 | |

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Data Sheet

| EPN: TI-TSA03 Mod | | lodel#: IPM | IPM S | | Serial #: N/A | | |
|--------------------------------|------------------------|-------------------------|--------------|--------------|---------------|----------|--|
| Manufacturer/Desc Indicator | ription: Red Lion Cont | rols/Heater Out Tem | perature | Location: MC | P (Right do | or) | |
| Test Equipment: | Type of Equ | ipment | Standards Nu | mber | Cal Exp Date | | |
| | | | | | 1 | 1 | |
| | | | | | 1 | / | |
| | <u></u> | | | | 1 | 1 | |
| | ***** | *********** Calibration | | ******** | *** | | |
| T414 | Daniand Output | Tolerance | MCP | As Found | In/Out | As Left | |
| Test input 4.00 mA | Desired Output | ± 5°F | WICP | AS FOUND | iii/Odi | AS LEIL | |
| 8.00 mA | 55,00°F | ±5°F | | | <u> </u> | | |
| | 85,00°F | ±5°F | | | | | |
| 12.00 mA 16.00 mA | 115.00°F | ±5°F | | | | | |
| 20.00 mA | 150.00°F | ± 5°F | | | | <u> </u> | |
| Please Circle: | Accept | or Reject | | | | - | |
| Comments: | | | | | | | |
| Performed By: | | | | Date: | | 1 . | |
| | | | | | | | |



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System Instrument Calibration

Data Sheet

| EPN: FI-TSA03 | -TSA03 Model #: IPM | | | Serial #: NA | | | |
|-------------------|--------------------------|---------------------|------------------|--------------|----------------------------|---------|--|
| Manufacturer/Desc | ription: Red Lion Contro | ls/Heater Out Flow | Indicator | Location: MC | Location: MCP (Right door) | | |
| Test Equipment: | Type of Equipment | | Standards Number | | Cal Exp Date | | |
| | | <u>.</u> | | <u></u> | | | |
| | | | | | | | |
| | | <u> </u> | | | | 1 | |
| | ******** | ******* Calibration | Data ******** | **** | · 杂交 | | |
| | | OUTPUT D | ATA | | | | |
| Test input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left | |
| 4.00 mA | 0.00 cfm | ± 25 cfm | | | | | |
| 8.00 mA | 350.00 cfm | ± 25 cfm | | | | | |
| 12.00 mA | 700.00 cfm | ± 25 cfm | | | | | |
| 16.00 mA | 110,00 cfm | ± 25 cfm | | | | | |
| 20.00 mA | 1400.00 cfm | ± 25 cfm | | | <u> </u> | | |
| Please Circle: | Accept o | r Reject · | | | | - - | |
| Comments: | | | | | | | |
| Performed By: | | | | Date: | | | |
| Checked By: | | | | - | | | |

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System Instrument Calibration

Data Sheet

| EPN: MI-TSA03 Model #: IPN | | del#: IPM | | Serial #: NA | | |
|----------------------------|--------------------------|---------------------|------------------|--------------|-------------|--|
| Manufacturer/Desc | ription: Red Lion Contro | ols/Heater Out (% R | tH) Indicator | Location: MC | P (Right do | or) |
| Test Equipment: | Type of Equip | ment | Standards Number | | Cal Exp | Date |
| | | | | | / | / |
| | | | | | / | 1 |
| | | | | | | 1 |
| | | | | | | |
| | **** | ******* Calibration | Data ******** | ***** | *** | |
| | | | | | | |
| Test Input | Desired Output | OUTPUT D. Tolerance | MCP | As Found | In/Out | As Left |
| 4.00 mA | 0.00% rH | ± 2% rH | WO | ASTOUNG | 1111001 | AS Lett |
| 8.80 mA | 30.00% rH | ± 2% rH | | | | <u> </u> |
| 12,00 mA | 50.00% rH | ± 2% rH | | | | <u> </u> |
| 16.00 mA | 75.00% rH | ± 2% rH | | | | <u> </u> |
| 16.80 mA | 80.00% rH | ± 2% rH | | | <u> </u> | - |
| 20.00 mA | 100.00% rH | ± 2% rH | | | | |
| Please Circle: | Accept c | | | | I | I |
| riease Circle. | Ассері с | Keject | | | | |
| Reason: | | | | | -, -, | |
| - | , | | | | | |
| Comments: | | | | | | - |
| _ | | | | | | ······································ |
| | | | | Deter | | , |
| Performed By: | | | | Date: | | |
| Checked By: | | | | | 1 | 1 |

EPN: FI-TSA05

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Serial #: NA

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System Instrument Calibration

Data Sheet

MCP-Installed Digital Indicators

Model #: IPM

| Manufacturer/Desc Indicator | ription: Red Lion Contro | ls/GAC Effluent Air | Flow | Location: MC | P (Right doo | or) |
|--------------------------------|--------------------------|---------------------|--------------|--------------|--------------|------------|
| Test Equipment: | Type of Equip | ment | Standards Nu | Cal Exp Date | | |
| | | | | | | 1 |
| | | | | | 1 | 1 |
| | | | | | | |
| | ***** | | | ****** | *** | |
| | -1 | OUTPUT D | | T | | 0 . 1 . 54 |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left |
| 4.00 mA | 0.00 cfm | ± 25 cfm | | | | |
| 8,00 mA | 350.00 cfm | ± 25 cfm | | | | |
| 12.00 mA | 700.00 cfm | ± 25 cfm | | | | |
| 16.00 mA | 110.00 cfm | ± 25 cfm | | | | |
| 20.00 mA | 1400.00 cfm | ± 25 cfm | | | | |
| Please Circle: | Accept o | r Reject | | | 4.94 | |
| Reason: | | | | | . | |
| Comments: | | | | | | |
| Performed By: Checked By: | | | | Date: - | | / |

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System Instrument Calibration

Data Sheet

| | M | CP-Installed Digital | Indicators | | | |
|------------------------|--------------------------|-------------------------|------------------|--------------|--------------|---------|
| EPN: FI-I1 | Мо | del#: IPM | | Serial #; NA | | |
| Manufacturer/Desc | ription: Red Lion Contro | ols/Injection Well Flow | Indicator | Location: MC | P (Right do | or) |
| Test Equipment: | Type of Equip | ment S | Standards Number | | Cal Exp | |
| | | | | <u> </u> | | |
| | | | | | | |
| | | | | | / | |
| | ***** | Calibration Da | | ******** | *** | |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Left |
| 4.00 mA | 0.00 gpm | ± 5 gpm | | | | |
| 8,00 mA | 55.00 gpm | ± 5 gpm | | | | |
| 12.00 mA | 110.00 gpm | ± 5 gpm . | | | | |
| 16,00 mA | 165.00 gpm | ± 5 gpm | | | | |
| 20.00 mA | 220.00 gpm | ± 5 gpm | | | <u></u> | |
| Please Circle: Reason: | Accept c | or Reject | | | - | |
| Comments: | | | | | | |
| Performed By: | | | | Date: | | 1 |
| Checked By: | | | | _ | | 1 |

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System Instrument Calibration

Data Sheet

| EPN: LI-11 | Model #: IPM Serial # | | | | rial #: NA | | |
|-----------------|---------------------------|-----------------------|--|--------------|---------------------------------------|---------|--|
| Manufacturer/De | scription: Red Lion Contr | ols/Injection Well Le | evel Indicator | Location: MC | MCP (Right door) | | |
| Test Equipment: | Type of Equipment | | Standards Number | | Cal Exp Date | | |
| | | | | | 1 | 1 | |
| | | | | | | 1 | |
| | | | | | 1 | 1 | |
| | ******** | ********* Calibration | Data *********************************** | ***** | *** | | |
| | | OUTPUT D | ATA | | . = | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 4.00 mA | 0.00 ft | ±3ft | | | | | |
| 8.00 mA | 58,00 ft | ±3ft | | | | | |
| 12.00 mA | 115.50 ft | ±3ft | | | | | |
| 16.00 mA | 173.00 ft | ±3ft | | | | | |
| 20,00 mA | 231.00 ft | ±3ft | | | | | |
| Please Circle: | Accept | or Reject | | | - | | |
| Reason: | | | | | | | |
| Comments: | Injection wells share a c | ommon level indicat | tor. | | · · · · · · · · · · · · · · · · · · · | | |
| | | | | D - • | , | , | |
| Performed By: | | | | Date: | | | |
| Checked By: | | | | <u> </u> | .1 | | |



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System Instrument Calibration

Data Sheet

| EPN: LIC/T01 | Mo | del # UDC3000/DC3 | 300K | Serial #: NA | | |
|-------------------|---------------------------|-----------------------|--------------|---------------------------------------|---------|--------|
| Manufacturer/Desc | cription: Honeywell/T01 \ | Water Level Controlle | er | Location: MCP (Center door) | | |
| Test Equipment: | Type of Equip | ment | Standards Nu | ımber | Cal Exp | Date |
| , , | •, •, | | | | 1 | 1 |
| | | | | | | 1 |
| | | | | · · · · · · · · · · · · · · · · · · · | 1 | 1 |
| | | | | | , | |
| | *** | | ·· | | | |
| | | OUTPUT DA | | | 1 | 1 |
| Test Input | Desired Output | Tolerance | МСР | As Found | In/Out | As Lef |
| 4.00 mA | 0.00" wg | ± 5" wg | | | | |
| 8.00 mA | 42.50" wg | ± 5" Wg | | | | |
| 12.00 mA | 85,00" wg | ± 5" Wg | | | | |
| 16.00 mA | 127.50" wg | ± 5" wg | | | | |
| 20.00 mA | 170.00" wg | ± 5" wg | | | | |
| lease Circle: | Accept c | or Reject | | | | |
| Reason: | | | | | | |
| Comments: | | | | | | |
| _ | | | | | | |
| Performed By: | | | | Date: | / | / |
| Checked By: | | | | | 1 | 1 |



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System Instrument Calibration

Data Sheet

MCP-Installed Microprocessor Controllers

| | . Model #: UDC3000/DC300K | | | Serial #: NA | | | |
|--|---|---|---|------------------------------------|--|--|--|
| scription: Honeywell/ | T02 Water Level Cont | roller | Location: MC | Location: MCP (Center door) | | | |
| Type of i | Equipment | Standards Nu | mber | Cal Exp Date | | | |
| | | | | | 1 | | |
| | | | | / | / | | |
| | | <u> </u> | | / | 1 | | |
| ************************************** | ibration Data ****** | ***** | **** | | | | |
| | OUTPUT | DATA | | | | | |
| Desired Outp | out Tolerance | MCP | As Found | In/Out | As Left | | |
| 0.00" wg | ± 5" wg | | | | | | |
| 42.50" wg | ± 5" wg | | | | | | |
| 85.00" wg | ± 5" wg | | | | | | |
| 127.50" wg | ± 5" wg | | | | | | |
| 170.00" wg | ± 5″ wg | | | | | | |
| Accept | or Reject | | | | | | |
| | | | | | | | |
| | | | Date: | | 1 | | |
| | Desired Outp 0.00" wg 42.50" wg 127.50" wg 170.00" wg | Type of Equipment OUTPUT Desired Output 0.00" wg | OUTPUT DATA Desired Output Tolerance MCP 0.00" wg ± 5" wg 42.50" wg ± 5" wg 85.00" wg ± 5" wg 127.50" wg ± 5" wg 170.00" wg ± 5" wg | Type of Equipment Standards Number | Type of Equipment Standards Number Cal Exp / / / / / / / / / / / / / / / / / / / | | |

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System Instrument Calibration

| | | Data | Sheet | | | |
|-------------------|----------------------|----------------------|------------------|---------------------------------------|--------------|---------|
| | W | CP-Installed Microp | rocessor Control | lers | | |
| EPN: FIC-TSL02 | | Model #: UDC300 | D/DC300K | Serial #: NA | | |
| Manufacturer/Desc | cription: Honeywell/ | PT01 Flow Controlle | r | Location: MC | P (Center o | loor) |
| Test Equipment: | Type of £ | Equipment | Standards Nu | ımber | Cal Exp Date | |
| | | | | | / | |
| | | | - | · · · · · · · · · · · · · · · · · · · | | |
| | | | | | <u> </u> | • |
| ***** | ******* Cal | ibration Data ****** | **** | **** | | |
| | | OUTPU' | T DATA | | | |
| Test Input | Desired Outp | ut Tolerand | e MCP | As Found | in/Out | As Left |
| 4.00 mA | 0.00 gpm | ±5 gpm | | | | |
| 8.00 mA | 46.00 gpm | ± 5 gpm | | | | |
| 12.00 mA | 92.00 gpm | ± 5 gpm | | | | |
| 16.00 mA | 138.00 gpm | ±5 gpm | | | | |
| 20.00 mA | 184.00 gpm | ± 5 gpm | | | | |
| Please Circle: | Accept | or Rejec | ot | | | |
| Reason: | | | | | | |
| _ | ····· | | | | | |
| Comments: | | | | | | |
| - | | | | | | |
| Performed By: | | | | Date: | . 1 | 1 |
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System Instrument Calibration

Data Sheet

MCP-Installed Microprocessor Controllers

| EPN: LIC-V01 | | Model #: UDC3000/DC300K | | Serial #: NA | | | | |
|------------------------|------------------------|----------------------------|------------------|------------------|--------|--------------|--|--|
| Manufacturer/Desc | cription: Honeywell/St | trîpper Tower Water Le | Location: MC | P (Center d | oor) - | | | |
| Test Equipment: | Type of Ec | Type of Equipment | | Standards Number | | Cal Exp Date | | |
| | | | | | / | 1 . | | |
| | | | | ····· | | 1 | | |
| | | | | | | 1 | | |
| | ********** | ************** Calibration | Data *********** | ****** | *** | | | |
| | | OUTPUT D | ATA | | | | | |
| Test Input | Desired Outpu | t Tolerance | MCP | As Found | ln/Out | As Left | | |
| 4.00 mA | 0.00" wg | ± 3" wg | | | | | | |
| 8.00 mA | 28.08" wg | ± 3" wg | | | | | | |
| 12.00 mA | 56.17" wg | ± 3" wg | | | | | | |
| 16.00 mA | 84.25" wg | ± 3" wg | | | | | | |
| 20.00 mA | 112.25" wg | ± 3" wg | | | | | | |
| Please Circle: Reason: | Accept | or Reject | | | | | | |
| Comments: | | | | | | | | |
| Performed By: | | | | Date: | _ / | | | |
| Checked By: | | | | _ | | 1 | | |
| | | | • | | F T- | | | |

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System Instrument Calibration

Data Sheet

| | МСР | -Installed Microproc | essor Control | lers | | | |
|--|---------------------------|----------------------|--|--------------|--------------|---------|--|
| EPN: TDIC-H01 | 1 Model #: UDC3000/DC300K | | | Serial #; NA | Serial #; NA | | |
| Manufacturer/Description: Honeywell/Chiller-Heater AT Controller | | | Location: MC | P (Right do | or) | | |
| Test Equipment: | Type of Eq | uipment | Standards Nu | mber | Cal Exp | Date | |
| | | | | | 1 | 1 | |
| | | | | | | 1 | |
| | - | | | | 1 | 1 | |
| | *** | OUTPUT D | ······································ | | *** | | |
| Test Input | Desired Output | Tolerance | MCP | As Found | In/Out | As Left | |
| 4.00 mA | (-) 20.00°F | ±5°F | | | | ļ ———— | |
| 8.00 mA | 52.50°F | ± 5°F | | | | | |
| 12.00 mA | 85.00°F | ±5°F | | | | | |
| 16.00 mA | 137.50°F | ±5°F | | | | | |
| 20.00 mA | 150.00°F | ± 5°F | | | | | |
| Please Circle: Reason: | ` Accept | or Reject | | | | | |
| | | | | | | | |
| Comments: | | | | | | | |
| | | | | | | | |
| Performed By: | | | | Date: | 1 | 1 | |
| Checked By: | | | | - | 1 | 1 | |
| · · · · · · · · · · · · · · · · · · · | | | | | | | |

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System Instrument Calibration

Data Sheet

Transmitter Calibration

| EPN: MT-TSA03 | | Model #: RH-2-1-R | | Serial #: N/A | | |
|-------------------|---------------------|-----------------------|------------------|---|---------------------------------------|--------------|
| Manufacturer/Desc | ription: General Ea | stern/Heater H-01 Rel | ative Humidity | Location: 10" NE side of he | - TSA03-P' ater H-01) | VC (Above |
| Test Equipment: | Type of Equipment | | Standards Number | | Cal Exp Date | |
| | | | | | / | 1 |
| | | | | | | 1 |
| | | | | | | 1 |
| | **** | OUTPUT | | ****** | *** | |
| Test Input | Desired Outp | | | As Found | in/Out | As Left |
| 0.00% rH | 4.00 mA | 3.20 to 4.80 m/s | | , | | |
| 30.00% rH | 8.80 mA | 8.00 to 9.60 m/ | 4 | | | |
| 50.00% rH | 12.00 mA | 11,20 to 12.80 | mA | | | |
| 80.00% rH | 16.80 mA | 16.00 to 17.60 | mA | | | |
| 100,00% rH | 20.00 mA | 19.20 to 20.80 | mA | | | |
| lease Circle: | Accept | or Reject | | | | |
| Reason: | | | | | | |
| Comments: | | | | | · · · · · · · · · · · · · · · · · · · | |
| | | ****** | | - · · · · · · · · · · · · · · · · · · · | | |
| | | | | | | |
| Performed By: | | | | Date: | 1 | 1 |